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Ad =>
(1) => d his
(2)
(3) (FILE 'USPAT' ENTERED AT 14:40:36 ON 25 FEB 92)
(4) SET PAGELength 62
(5) SET LINELENGTH 78
(6) L1 256 S 364/927.99/CCLS
(7) L2 317 S 364/929.4/CCLS
(8) L3 527 S 364/952.1/CCLS
(9) L4 103 S 364/952.5/CCLS
(1) L5 275 S L2 NOT L1
SET HEAD OFF
Named L6 12040 S (INTERFAC? OR COUPL?) (P) DISK
L7 1664 S HEAD## (P) L6
Limit L8 8 S L1 AND L7
L9 689 S ADAPTER### (P) DISK
L10 2313 S L9 OR L7
Retrie L11 16 S L1 AND L10
L12 48 S (L2 OR L3 OR L4 OR L5) AND L10
Pick a L13 19922 S 360/?/CCLS
(0) L14 792 S L13 AND L10
(C) L15 287 S 364/238.2/CCLS
(A) L16 1369 S 364/238.3/CCLS
L17 709 S 364/248.1/CCLS
Pick a L18 147 S (L15 OR L16 OR L17) AND L10
Pi L19 142 S L18 NOT ( L8 OR L11 OR L12 )
L20 133 S L19 NOT L14

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Pick a

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Retrie

Execut

INPUT:

d his

(FILE USPAT)

SET PAGELength 19

SET LINELENGTH 78

L1 4475 S READ? (P) WRITE? (P) HEAD#

L2 8 S BYPASS? (P) L1

00:10N501 10:20:08

U.S. Patent & Trademark Office

P0017

=> set head off

SET COMMAND COMPLETED

=> d 1-8

1. 4,942,485, Jul. 17, 1990, Apparatus capable of data reproduction from digital tape cassettes or like storage media employing two different recording methods; Shinji Umehara, et al., 360/46, 67 [IMAGE AVAILABLE]
2. 4,769,724, Sep. 6, 1988, Magnetic head drive apparatus which uses a common current source for the read/write head and the erasing head; Masahiro Kusunoki, et al., 360/61, 46, 63, 66, 68
3. 4,698,711, Oct. 6, 1987, Simplified, shielded twin-track read/write head structure; Albert W. Vinal, 360/113, 126
4. 4,504,880, Mar. 12, 1985, Integrated magnetic recording head assembly including an inductive write subassembly and a magnetoresistive read subassembly; Mark A. Church, et al., 360/113
5. 4,138,719, Feb. 6, 1979, Automatic writing systems and methods of word processing therefor; H. Wallace Swanstrom, et al., 364/200, 225.6, 225.7, 225.8, 234, 234.2, 235, 235.7, 236, 236.3, 236.4, 236.5, 236.6, 237, 237.2, 237.8, 238.3, 239, 239.3, 239.7, 240.1, 243, 244, 244.1, 244.6, 246, 246.3, 249.8, 252, 259, 259.4, 270, 273 [IMAGE AVAILABLE]
6. 3,792,450, Feb. 12, 1974, SYSTEM FOR OVERCOMING FAULTS IN MAGNETIC ANISOTROPIC MATERIAL; Joseph E. Bogar, et al., 365/1, 15
7. 3,761,906, Sep. 25, 1973, TAPE SYSTEM; Leslie P. Finster, et al., 360/42; 226/196; 360/51 [IMAGE AVAILABLE]
8. 3,688,287, Aug. 29, 1972, COMPUTER MEMORY SYSTEM; Ralph S. Perry, 360/69; 340/683; 360/103

=> d kwic 1-8

US PAT NO: 4,742,485 [IMAGE AVAILABLE]

L2: 1 of 3

DETDESC:

LETD(21)

FIG. 1(A) on the other hand, illustrates how the same data as represented in FIG. 7 is recorded by write equalization on the magnetic tape 24' of the second tape cassette 22'. FIG. 6(B) shows the corresponding data signal produced by the read assembly 32 on retrieving the write equalized

and, as illustrated in FIG. 1, it will be noted in FIG. 8(a) that each binary zero bit out of the ~~NRZI~~ equalized data contains both high and low states. However, since binary ones are recorded the same way as with NRZI, ~~NRZI~~ equalization may be considered a modification of NRZI. The corresponding ~~NRZI~~ output signal of FIG. 8(b) is essentially equivalent to the

US PAT NO: 4,942,465 IMAGE AVAILABLE

L2: 1 of 8

DETD(16):

differentiation of the ~~NRZI~~ output signal of FIG. 7(b), for, in FIG. 8(b), the zero crossing points of the waveform correspond to binary ones. This ~~NRZI~~ output signal needs no differentiation. Therefore, as will be understood by referring back to FIG. 4, the data signal representative of the recovered ~~NRZI~~ equalized data is directed to the flat amplifier circuit 74 and, after an ~~INVERSE~~ stage, the differentiating amplifier circuit 92, to the shaping circuit 110. In this shaping circuit 110 the input signal representative of the ~~NRZI~~ equalized data is processed as above described with reference to FIGS. 5 and 6 to provide the same rectangular pulse.

US PAT NO: 4,769,724

L2: 2 of 8

US PAT NO: 4,769,724

L2: 2 of 8

DETDESC:

DETD(13):

The arrangement in FIG. 3 includes smoothing circuit 34 arranged between center point 52 of ~~NRZI~~/~~NRZI~~ ~~NRZI~~ 8 and terminal 54 of erasing ~~NRZI~~ 10, to suppress a ripple component of the drive current flowing from ~~NRZI~~ 8, and adjustable ~~INVERSE~~ circuit 32 provided in parallel with ~~NRZI~~ 10, in addition to the arrangement in FIG. 1.

DETDESC:

DETD(12):

If . . . by controller 36. A drive current having a first predetermined

US PAT NO: 4,769,724

L2: 2 of 8

DETD(16):

value is output from constant-current source 38. The current from ~~NRZI~~/~~NRZI~~ ~~NRZI~~ 6 is ~~INVERSE~~ by a current having a value of the second predetermined value. Therefore, a current having a value of the difference between the first and third predetermined values is supplied across erasing ~~NRZI~~ 10.

DETDESC:

DETD(12):

If . . . controller 36. A drive current having a third predetermined value is generated by constant-current source 38. A current flowing through ~~NRZI~~/~~NRZI~~ ~~NRZI~~ 6 is ~~INVERSE~~ by a current having a fourth predetermined value. Therefore, a current having a value of the difference

US PAT NO: 4,769,724

L2: 2 of 8

DETD(16):

between the third and fourth predetermined values is supplied across erasing

US PAT NO:

4,676,711

3 of 8

DETD(7)

DETD(25)

The presence of the shields 7 also greatly reduces the fringing gradient effects from the twin-track ~~READ~~ during writing which may cause interference in adjacent tracks or portions of the medium. The primary reason is that the main field generated by the twin-track ~~READ/WRITE~~ ~~HEAD~~ passes through the medium rather than ~~bypassing~~ the medium as in

US PAT NO:

4,676,711

L2: 3 of 8

DETD(25)

the case for ordinary longitudinal or lateral gap ~~READ~~ recording systems. It is the fringe fields in longitudinal recording that ordinarily perform the writing function by design and these. . . have a relatively poor spatial gradient. In contrast, vertical twin track recording systems couple most of the flux from the ~~READ~~ or writing ~~READ~~ pole tips directly into the medium. There is some shielding effect nevertheless and this can be reduced to levels well. . .

US PAT NO:

4,504,380

L2: 4 of 8

SUMMARY:

BSUM(7)

10:23:12

US PAT NO:

4,504,380

L2: 4 of 8

BSUM(7)

A second problem that is encountered with ~~READ/WRITE HEAD~~ assemblies of this type involves the shorting of the two conductors that contact the F1 layer. During fabrication of the. . . sensor and conductors, a shorting condition occurs between the F1 layer and these conductors. Consequently, the MR sensor is electrically ~~bypassed~~ by the F1 layer at an overlapping area, so that the device is not operable.

US PAT NO:

4,136,719 [IMAGE AVAILABLE]

L2: 5 of 5

US PAT NO:

3,792,450

L2: 6 of 8

DETD(25)

US PAT NO:

3,792,450

L2: 6 of 8

DETD(7)

The. . . but they introduce a generalized defect in the thin magnetic film and illustrate the method by which this defect is ~~bypassed~~ in the operation of the memory. The reference characters in FIGS. 6-11 which refer to the same components remain the. . . generator 65 generates magnetic d line 6-8

US PAT NO:

3,792,450

L2: 6 of 8

DETD(25)

DETD(7)

The . . . they introduce a generalized defect in the thin magnetic film and illustrate the method by which this defect is ~~by-passed~~ in the operation of the memory. The reference characters in FIGS. 5-11 which refer to the same components remain the. . . generator 65 generates magnetic bubbles and supplies them to a transfer block 71 which is under the control

US PAT NO: 3,792,450

L2: 6 of 8

DETD(7)
of a ~~write~~ control circuit or terminal 67. Those bubbles generated by the generator 65 which are not transferred to the transfer loop. . . Block 71 are destroyed in an annihilator 66 to which the generator 65 is connected by a magnetic channel. A ~~write~~ control circuit 67 is connected to the transfer block 71 causing the transfer of bubbles from the generator 65 to the transfer loop 61. The information contained in the transfer loop 61 can be ~~read~~ out by means of a ~~read~~ head 74. Although not shown in FIG. 6, the ~~read~~ head 74 is connected to an output or utilization circuit through a terminal 209. An erase control circuit ~~read~~ or terminal 65 controls the transfer of bubbles from the transfer loop 61 across a transfer block 67 to an. . . a black, or filled-in, circle 82 is shown, it indicates that a bubble is present at that position. A row ~~read~~ head 39 is adjacent a row marker loop 78 and is controlled by a pulse coupled to an input terminal 85. Likewise, a column ~~read~~ head 63 is adjacent a

US PAT NO: 3,792,450

L2: 6 of 8

DETD(7)
column loop 79 and is connected to an input terminal 86. The control loop 76 has a control ~~read~~ head 75 and a control ~~write~~ head 77 adjacent it. Having described the basic organization of the sample memory chip 31, the method and apparatus for detecting. . .

US PAT NO: 3,761,906 [IMAGE AVAILABLE]

L2: 7 of 8

DETD(5)

DETD(4)

When . . . tape. But the other motor must drive its respective reel so that the tape which is being fed past the ~~read~~ and ~~write~~ heads is wound up on the reel. This motor is preferably driven at a faster speed so

US PAT NO: 3,761,906 [IMAGE AVAILABLE]

L2: 7 of 8

DETD(4)
that no slack develops. . . is being rewound by the supply motor, control latches 202 short conductor 207 to ground. The supply motor current thus ~~by-passes~~ resistor 206 and is of greater magnitude to control the faster operation of the motor. Similarly, conductor 220 is shorted. . .

US PAT NO: 3,636,287

L2: 8 of 8

ABSTRACT:

It . . . to store information in the form of magnetic bits on two sides. Faulty areas are located on the discs and ~~by-passed~~ by switching to another disc on a sector basis to ensure computer reliability. The disc memory elements receive information from a plurality of ~~read~~ heads, ~~heads~~ which during normal operation are in flying association with the discs. For each memory disc there is a yoke assembly which includes a